

ISO/IEC 18047-3:2022-03 (E)

Information technology - Radio frequency identification device conformance test methods - Part 3: Test methods for air interface communications at 13,56 MHz

Contents

Page

| | |
|---|-----------|
| Foreword..... | iv |
| Introduction..... | v |
| 1 Scope..... | 1 |
| 2 Normative references..... | 1 |
| 3 Terms, definitions, symbols and abbreviated terms..... | 1 |
| 3.1 Terms and definitions..... | 1 |
| 3.2 Symbols and abbreviated terms..... | 2 |
| 4 Conformance tests for ISO/IEC 18000-3 — 13,56 MHz..... | 3 |
| 4.1 General..... | 3 |
| 4.2 Default conditions applicable to the test methods..... | 3 |
| 4.2.1 Test environment..... | 3 |
| 4.2.2 Pre-conditioning..... | 3 |
| 4.2.3 Default tolerance..... | 3 |
| 4.2.4 Spurious inductance..... | 3 |
| 4.2.5 Total measurement uncertainty..... | 3 |
| 4.3 Conformance tests for ISO/IEC 18000-3 Mode 1..... | 3 |
| 4.3.1 General..... | 3 |
| 4.3.2 Test apparatus and test circuits..... | 4 |
| 4.3.3 Functional test — Tag..... | 8 |
| 4.3.4 Functional test — Interrogator..... | 9 |
| 4.4 Conformance tests for ISO/IEC 18000-3 Mode 2..... | 10 |
| 4.4.1 General..... | 10 |
| 4.4.2 Test apparatus and test circuits..... | 10 |
| 4.4.3 Functional test — Tag..... | 12 |
| 4.4.4 Functional test — Interrogator..... | 13 |
| 4.5 Conformance tests for ISO/IEC 18000-3 Mode 3 (mandatory ASK part)..... | 14 |
| 4.5.1 General..... | 14 |
| 4.5.2 Test apparatus and test circuits..... | 14 |
| 4.5.3 Functional test – tag..... | 18 |
| 4.5.4 Functional test — interrogator..... | 19 |
| Annex A (normative) Test setup parameters and dimensions for tags smaller than or equal to an ISO/IEC 7810 ID-1 outline..... | 21 |
| Annex B (normative) Guideline for RFID tags larger than ISO/IEC 7810 ID-1 size..... | 23 |
| Annex C (normative) Test interrogator antenna..... | 27 |
| Annex D (informative) Test interrogator antenna tuning..... | 30 |
| Annex E (normative) Sense coil..... | 33 |
| Annex F (normative) Reference tag for interrogator power test..... | 35 |
| Annex G (informative) Reference tag for load modulation test..... | 37 |
| Annex H (informative) Program for evaluation of the spectrum..... | 39 |
| Bibliography..... | 43 |